

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

Claims 1-68 (canceled).

Claim 69 (currently amended): A method for inducing tissue formation at a locus accessible to at least one progenitor cell of a mammal, wherein the tissue is selected from the group consisting of bone, cartilage, tendon/ligament and neural tissue, comprising the step of implanting a morphogenic device, whereby the morphogenic device induces tissue formation from the progenitor cell in the mammal, the morphogenic device comprising:

a) an implantable biocompatible carrier,

b) a morphogenic protein comprising a polypeptide selected from the group consisting of ~~BMP-4~~, BMP-5, BMP-6, BMP-7 (OP-1), BMP-8, BMP-9, BMP-10, BMP-11, BMP-12, BMP-13, Dpp, Vg-1, COP-5 and COP-7 disposed in the carrier, the morphogenic protein

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

capable of inducing tissue formation when accessible to the progenitor cell, and

c) a morphogenic protein stimulatory factor (MPSF) selected from the group consisting of IGF-I, hydrocortisone, insulin and parathyroid hormone, wherein said MPSF is disposed in the carrier, and wherein said MPSF is at a concentration effective to synergistically stimulate the ability of the morphogenic protein to induce tissue formation from the progenitor cell.

Claim 70 (withdrawn): The method according to claim 69, wherein the locus is a jaw bone for use in periodontal or dental reconstructive procedures.

Claim 71 (previously presented): The method according to claim 69, wherein the locus is a bone defect selected from the group consisting of a fracture, a non-union fracture, a fusion and a bony void.

Claim 72 (withdrawn): The method according to claim 69, wherein the locus is a joint for use in cartilage and soft tissue repair.

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

Claim 73 (withdrawn): The method according to claim 69, wherein the locus is nervous system-associated tissue for use in neural regeneration and repair.

Claims 74-101 (canceled).

Claim 102 (previously presented): The method according to claim 69, wherein the carrier comprises heparin or a salt thereof.

Claims 103-105 (canceled).

Claim 106 (previously presented): The method according to claim 69, wherein the morphogenic protein comprises a pair of subunits disulfide bonded to produce a dimeric species.

Claim 107 (canceled).

Claim 108 (previously presented): The method according to claim 69, wherein the morphogenic protein is capable of inducing the progenitor cell to form endochondral or intramembranous bone.

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

Claim 109 (previously presented): The method according to claim 69, wherein the morphogenic protein is capable of inducing the progenitor cell to form cartilage.

Claim 110 (previously presented): The method according to claim 69, wherein the morphogenic protein is capable of inducing the progenitor cell to form tendon/ligament tissue or neural tissue.

Claim 111 (canceled).

Claim 112 (currently amended): The method according to claim 69, wherein the morphogenic protein comprises a polypeptide selected from the group consisting of BMP-7 (OP-1), ~~BMP-4~~ and BMP-6.

Claim 113 (previously presented): The method according to claim 69, wherein the morphogenic protein comprises BMP-7 (OP-1).

Claim 114 (previously presented): The method according to claim 106, wherein the dimeric species is a homo- or hetero-dimer comprising at least one BMP-7 (OP-1) subunit.

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

Claim 115 (previously presented): The method according to claim 69, wherein the morphogenic protein stimulatory factor is IGF-I.

Claim 116 (previously presented): The method according to claim 69, wherein the morphogenic protein is present in a pharmaceutical composition at a concentration of at least about 1 ng/ml, and the morphogenic protein stimulatory factor is present in the pharmaceutical composition at a concentration of at least about 0.01 ng/ml.

Claim 117 (previously presented): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is IGF-I and is present in the pharmaceutical composition at a concentration of from about 0.1 ng/ml to about 50 ng/ml.

Claim 118 (previously amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

stimulatory factor is hydrocortisone and is present in the pharmaceutical composition at a concentration of from about 0.05 nM to about 5.0 nM.

Claim 119 (withdrawn): The method according to claim 118, wherein BMP-7 (OP-1) is about 200 ng/ml and hydrocortisone is about 0.5 - 5.0 nM.

Claim 120 (previously amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is insulin and is present in the pharmaceutical composition at a concentration of from about 0.01 nM to about 1000 nM.

Claim 121 (previously amended): The method according to claim 69, wherein the morphogenic protein is BMP-7 (OP-1) and is present in a pharmaceutical composition at a concentration of from about 1 ng/ml to about 500 ng/ml and the morphogenic protein stimulatory factor is parathyroid hormone and is present in the pharmaceutical composition at a concentration of from about 10 nM to about 1000 nM.

Application No.: 09/287,500

Amendment dated November 12, 2004

In response to Examiner's Office Action dated July 12, 2004

Claim 122 (withdrawn): The method according to claim 121, wherein BMP-7 (OP-1) is about 200 ng/ml and parathyroid hormone is about 25-200 nM.